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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,409	02/11/2002	Zhong Li	01-24	2903

7590

10/03/2003

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EXAMINER

TRAN, LEN

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,409	LI ET AL.	
	Examiner	Art Unit	
	Len Tran	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al (6,264,765) in view of Yasuhara et al (US 6,290,784).

Bryant et al disclose the method for producing an aluminum alloy, AA5754 alloy (table 2), comprising the steps of providing a source of molten aluminum, providing a caster, rolling the caster into a sheet product, continuously annealing the sheet product at a temperature in a controlled temperature range, measuring the degree of annealing of the sheet product (col. 5,

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lines 55-60), relaying the signal to the controller (23), wherein in the controller, comparing the signal to previous signals relating to degree of annealing of the sheet product to provide a comparison, and in response to the comparison, maintaining or changing the temperature upward or downward to produce desired annealing (col. 5, lines 40-67). The hot mill entry temperature is in the range of 700 to 1100 degrees C (col. 6, line 23). The twin belt casting is to produce a slab of 0.2 to 2 inches thick (col. 4, line 41). Hot rolling of the slab to a thickness in the range of 0.01 to 0.25 inch (col. 4, line 46).

Bryant et al fail to teach measuring degree of recrystallization of the sheet product on a continuous basis to provide a recrystallization related signal.

Bryant et al disclose other variables besides annealing temperature can be used for measurement. However, Bryant et al is silent to the variables being the degree of recrystallization.

Yasuhara et al disclose measuring the degree of recrystallization *for the purpose of monitoring the working temperature (col. 9, lines 37-43, col. 10, lines 23-31) and the importance of the stress and strain relationship.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to measure the degree of recrystallization as taught by Yasuhara et al, in Bryant et al in order to monitor the strip condition.

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4. Claims 12 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al (US '765) as applied to claim 1 above in paragraph 3, and further in view of Kamat (US 5,634,991).

Bryant et al disclose the claimed invention above, but fail to teach cold rolling the hot strip after annealing step to a gauge in the range of 0.01 to 0.16 inch.

However, Kamat discloses the method of cold roll after annealing and having a final gauge of 0.02 inch for the purpose of improving formability.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have cold rolled after annealing as taught by Kamat, in Bryant et al in order to improve formability.

Response to Arguments

5. Applicant's arguments filed 8/18/03 have been fully considered but they are not persuasive.

Applicant argues that Bryant et al is silent with respect to on-line determination of texture and grain structure during production and immediate or on-line controlling or changing of texture and grain structure to continuously produce sheet having the desired forming characteristic. Furthermore, applicant argues that Yasuhara et al fail to disclose measuring the recrystallization in real time, and wherein the material casted is not aluminum. Applicant argues that Yasuhara et al only teaches simulating a steel strip, not an aluminum strip and therefore

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would not have been obvious to replace a steel strip with an aluminum strip. Examiner respectfully disagrees. Yasuhara et al disclose the *importance for measuring recrystallization is to see the relationship between the stress and strain of the strip*. Bryant et al had already shown *a controller measuring other variables in real time except for the recrystallization of the strip*. However, Yasuhara et al discloses the importance of measuring the recrystallization, since this information can *determine the stress and strain relationship of the strip, whereby the strip can be monitored prior to producing the final product*. Therefore, the combination of the prior arts is obvious to one of ordinary skill in the art, since the motivation is *to determine the recrystallization*.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Len Tran whose telephone number is (703)605-1175. The examiner can normally be reached on M-F, 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Len Tran
Examiner
Art Unit 1725

LT
September 29, 2003


ALEXANDRA ELVE
PRIMARY EXAMINER